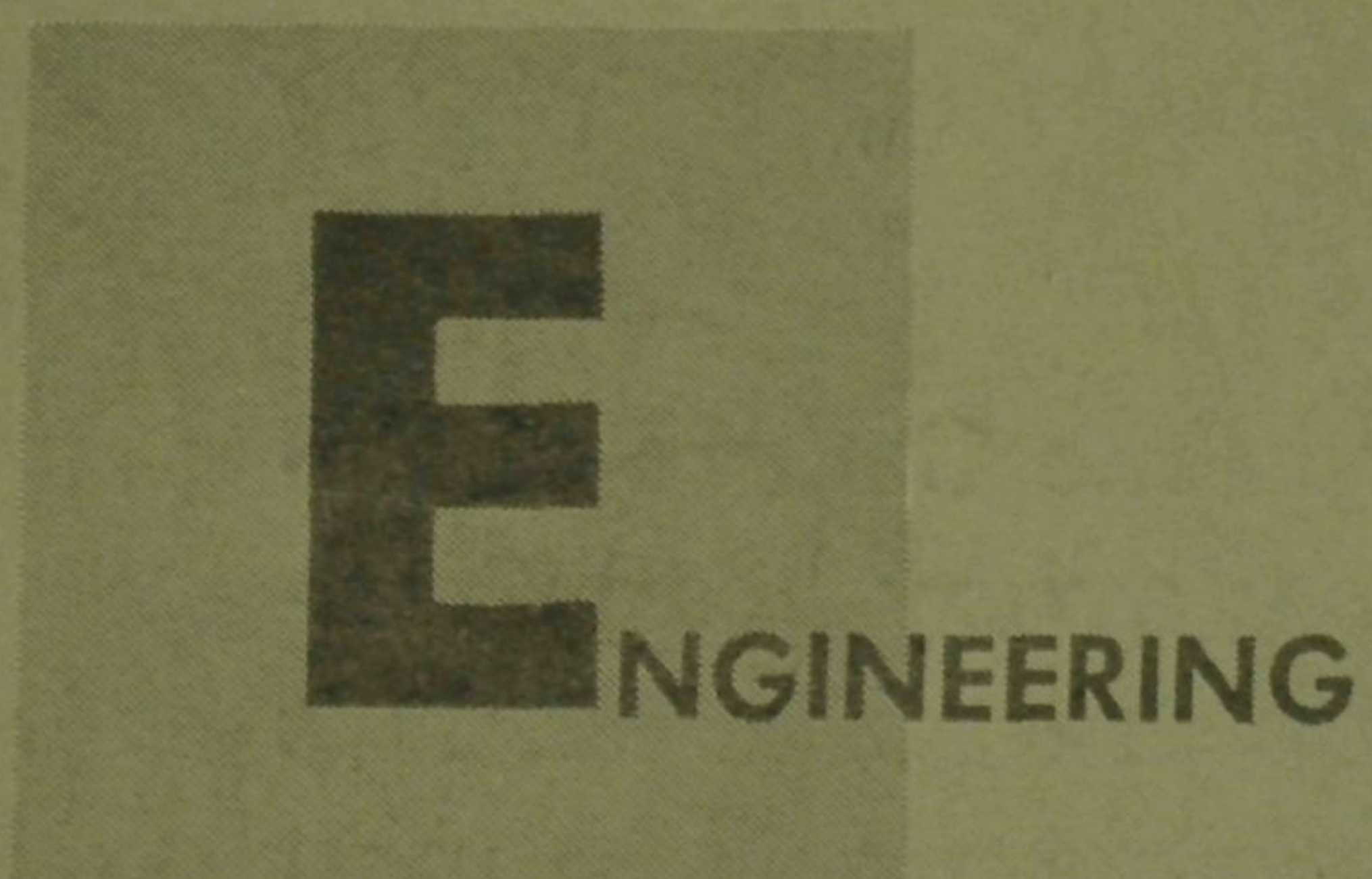
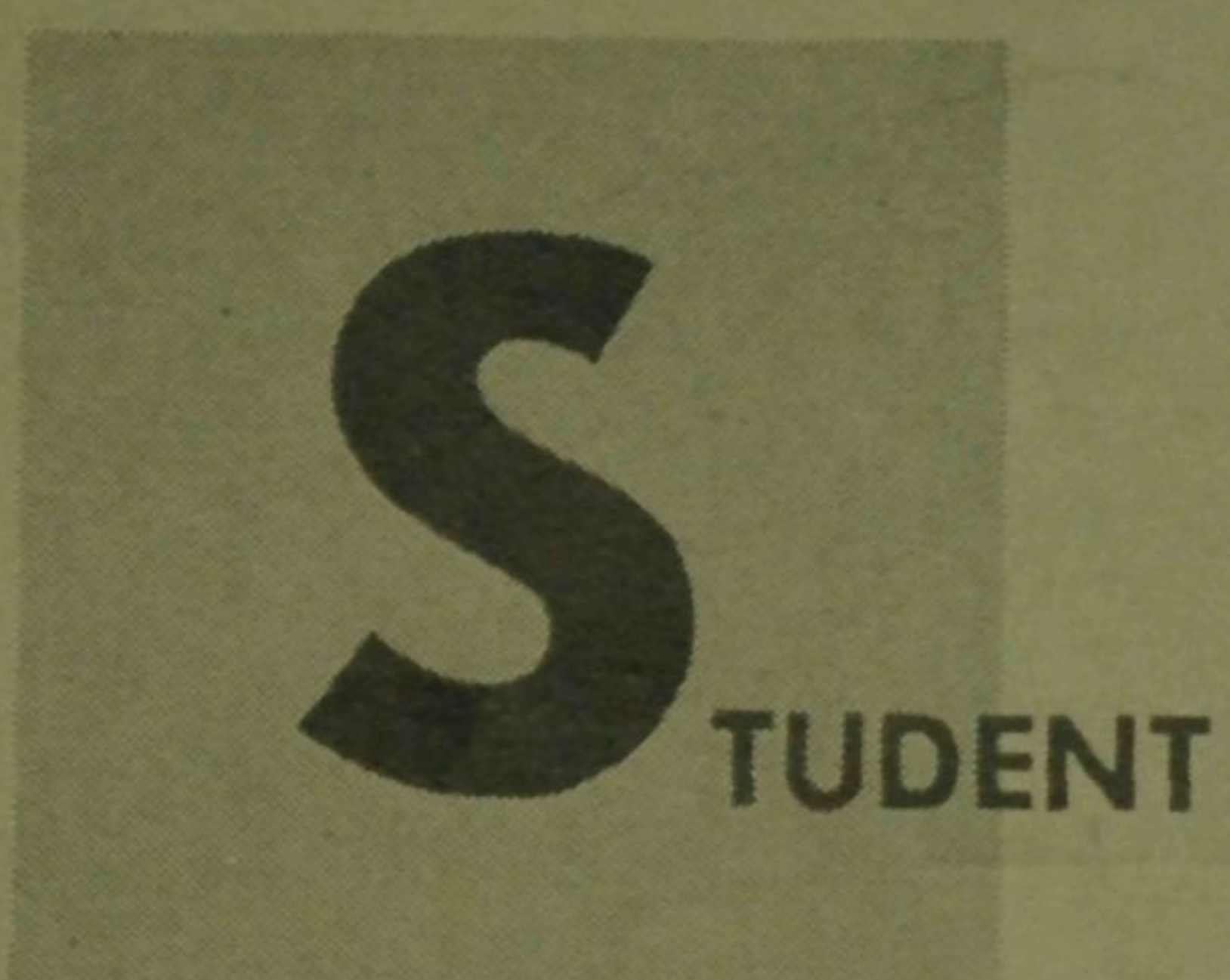
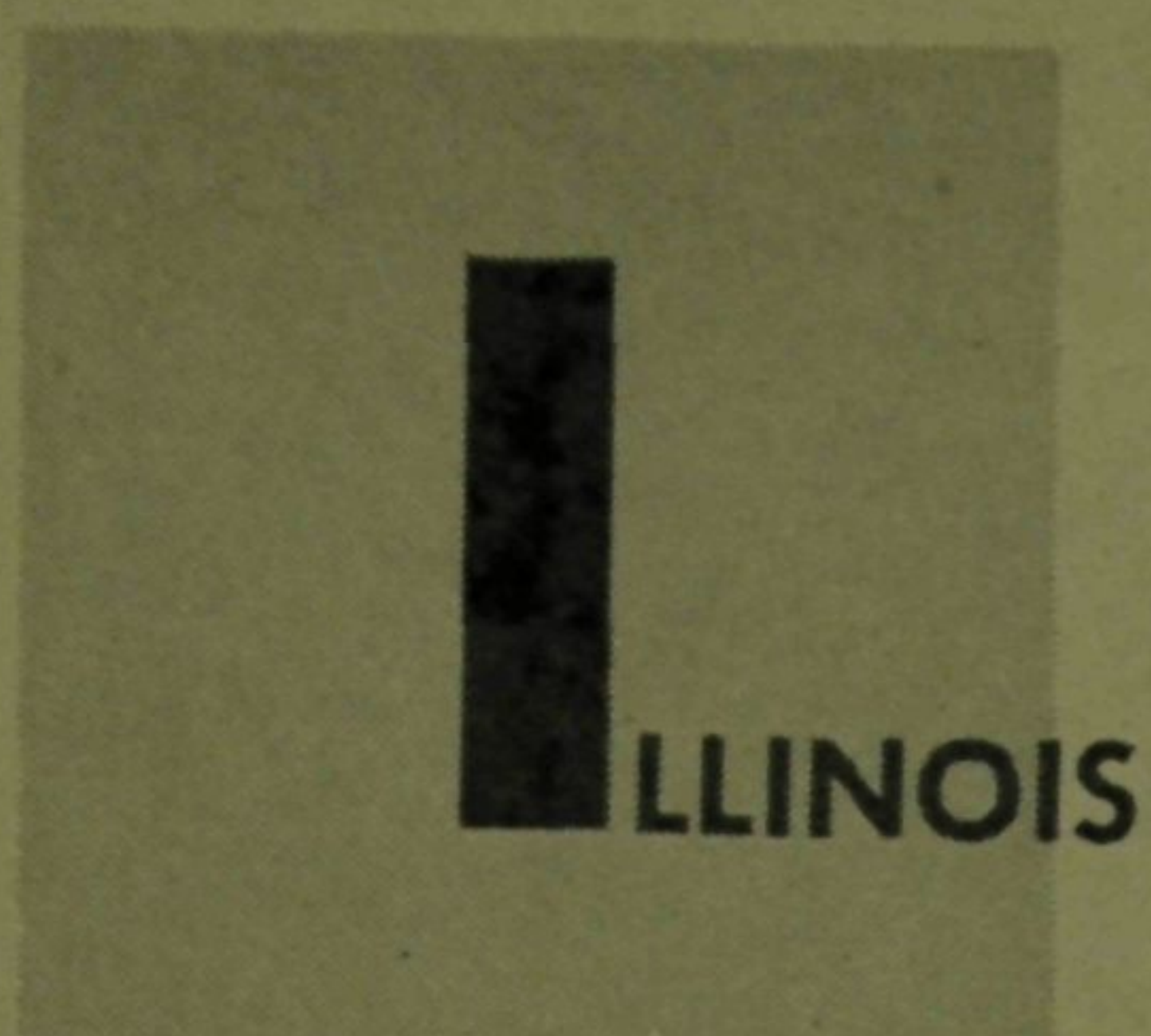


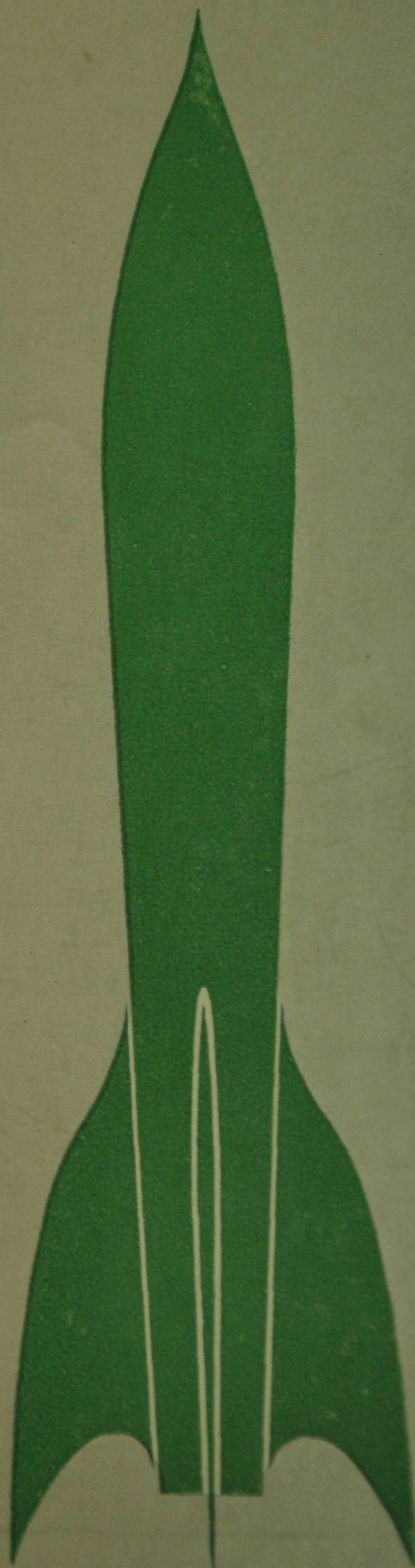
The University of Illinois presents



FRIDAY
MARCH 31
2 PM - 10 PM

SATURDAY
APRIL 1
9 AM - 6 PM

PROGRAMS 10c





DEAN W. L. EVERITT

Greetings!

Speaking for the students and faculty in the College of Engineering, I would like to extend to you a very hearty welcome to the 1950 Illinois Student Engineering Exhibit. It is the sincere wish of all of us that your visit here will be most pleasant. Toward that end, a program containing a great variety of interesting exhibits and demonstrations has been provided.

This year's exhibit, the first since the war, is made possible by the combined efforts of all the Engineering students, coordinated through the Engineering Council, an organization which represents the various student engineering societies of the individual departments. We all hope that in addition to enjoying the show, you will also gain a better understanding of the profession of engineering and of the unusually fine facilities at Illinois for training for that profession.

W. L. EVERITT
Dean, College of Engineering

AERONAUTICAL LABORATORY I

Presented by the Institute of Aeronautical Sciences.

WIND TUNNEL TEST—will be operated every half hour on the first and third quarters of the hour.

AERONAUTICAL LABORATORY II

The following exhibits are presented by the Institute of Aeronautical Sciences.

TURBO JET ENGINE—working cutaway of the type used in modern fighter planes.

CUTAWAY PULSE JET ENGINE—of the type used to power German buzz bombs.

SMALL RECIPROCATING ENGINE—of the type used to power light planes.

LATEST DESIGNS—will be shown along with student-built models.

STRUCTURAL FRAMEWORK—of an aircraft.

LANDING GEAR DROP-TESTING DEVICE

HYDRAULIC TESTING MACHINE

CAR WHEEL and BRAKE SHOE TESTING LABORATORY

Presented by the American Society of Civil Engineers.

A RAILWAY CAR WHEEL TESTER—capable of exerting a shoe pressure of 22,000 pounds, operating at speeds up to 100 miles per hour.

CERAMICS BUILDING

The following exhibits are presented by the student branch of the American Ceramic Society.

FIRING OF ENAMELS, *Kiln House*

BRICK MACHINE—in actual operation, *Kiln House*

SMELTING—of frits, *Kiln House*.

POTTERY DEMONSTRATION, *Room 112*

REFRACTORY DEMONSTRATION, *Room 113-A*

SPRAYING AND FIRING, *Enamel Laboratory, room 116*

MEASUREMENT—of glass properties, *Glass Laboratory, room 216*

MEASUREMENT—of high temperatures, *Pyrometry Laboratory, room 317.*

IDENTIFICATION OF MINERALS—by microscopic means, *Microscopy Laboratory, room 322.*

CIVIL ENGINEERING BUILDING

The following displays are presented by the Architectural Engineers.

STUDENT PROBLEMS—in the architectural design of buildings.

MODELS—illustrating structural systems and materials.

STUDENT NOTEBOOKS—in steel and concrete.

BLUEPRINTS—showing structural details.

PHOTOGRAPHS—of architectural structures.

SELECTED STRUCTURAL MATERIALS—on display.

The following exhibits are presented by the Institute of Traffic Engineers.

TRAFFIC COUNTERS—recording the number of vehicles passing a point each hour.

RADAR SPEED METER—in operation continuously recording the velocity of vehicles on Green street.

DRIVING TRAINING CAR

DRIVER REACTION METER

MOVIES—showing all fields of civil engineering, *Room 205.*

The next display is presented by Tau Nu Tau, honorary fraternity for military engineering students.

TWO SCALE MODELS OF BRIDGES—The M-4AZ floating bridge, which is flexible and semi-permanent, and the Bailey Bridge, considered as a permanent bridge, *Room 209.*

EAST CHEMISTRY BUILDING

The following exhibit is presented by the American Society of Agricultural Engineers.

A MODEL DRAINAGE DITCH—showing how the capacity flow of drained water can be handled by the use of well planned and constructed ditches.

MACHINE AND POWER—of “Yesterday, Today, and Tomorrow,” a panorama showing the improvements of agricultural machinery. Cut-away views and movies will show the working mechanisms of modern farm equipment.

YOUR FARMSTEAD IN THE FUTURE—showing improvements and new developments in farm building.

The following exhibit is presented by the American Institute of Chemical Engineers.

COLD FIRE DEMONSTRATION—showing that by a special combination of chemicals, a reaction can be made to take place at a different temperature.

WATER BOILING IN A PAPER CUP—heated by a direct Bunsen flame.

PRESSURE DROP DEMONSTRATION—along a pipe.

MINIATURE VOLCANO—showing that a high temperature is possible in a chemical reaction.

BURNING OF SUGAR—by means of a catalyst.

MOVIES—4:00, 7:00, and 9:00 p.m., Friday, March 31, and at 10:00 a.m., 1:00 and 3:00 p.m., Saturday, April 1, *Lecture Hall.*

ELECTRICAL ENGINEERING BUILDING

The following exhibits are presented by the combined student branch of the American Institute of Electrical Engineers and the Institute of Radio Engineers.

STRENGTH TESTER—Determine your coefficient of developed manpower.

FLOATING DISHPAN—Like a strapless evening gown; no visible means of support.

TIN CAN MOTOR—A powerman's nightmare.

Shown in the Dynamo Laboratory, room 50.

KISSOMETER—An electronic indication of osculation conductivity.

ELECTRICAL SCALE—Strain gages fixed to a beam indicating the weight on the beam.

LIE DETECTOR—Will catch you every time.

Shown in the Measurements Laboratory, room 146.

COLOR ORGAN—Colors appear in harmony with the music, *Lounge, room 165.*

GHOST WRITER—Your name written by a stream of electrons.

PHOTOELECTRIC TRANSMISSION OF SOUND.

ELECTRONIC MOTOR CONTROL—Similar to those used for large industrial machines.

Shown in the Electronics Laboratory, room 240.

THEREMIN—Movement of the operator's hands controls the tone and volume although the operator does not touch the instrument. *Radio Laboratory, room 246.*

TELEVISION SET—in operation.

RADAR SET.

STANDING WAVES—along a transmission line.

Shown in the Ultra High Frequency Laboratory, room 251.

The following displays are presented by the student branch of the Illuminating Engineering Society.

BLACK LIGHT—It's out of this world.

STROBOSCOPIC EFFECTS—See motion "frozen" with light.

LIGHT THAT IS BENT—Really twisted like a pretzel.

HIGH-FREQUENCY LIGHTING—One way to avoid paying light bills.

PSYCHOLOGICAL EFFECTS OF COLOR.

TIME MIRROR—See yourself in the future.

THE PROBLEM OF GLARE—A method of remedying it without turning off the light.

FOUNDRY BUILDING

The following demonstrations are presented by the student branch of the American Foundrymen's Society.

SAND TESTS—for proper moisture, bond strength, and clay content. *Sand-testing Laboratory.*

CORES—will be made and baked in ovens. *Core Room.*

MOLDS—will be made by students on the molding floor.

IRON, ALUMINUM AND BRASS—will be poured into molds.

GASOLINE ENGINE PARTS—will be cast.

SOUVENIRS—will be given to the public in the form of ashtrays and paperweights.

HYDRAULIC ENGINEERING LABORATORY

The following exhibits are presented by the American Society of Civil Engineers.

DENSITY CURRENT RESERVOIR MODEL—showing how they become filled with silt from rivers.

RAIN GAGES AND WATER CURRENT METERS—will be on display.

MECHANICAL ENGINEERING BUILDING

The following exhibits are presented by the American Society of Mechanical Engineers.

STRUCTURE OF GRAINS IN VARIOUS METALS—shown under microscopes. *Microstructure Laboratory, room 120.*

INDUCTION HEATING—and treating of various metals. *Heat Treating Laboratory, room 114.*

ROCKWELL AND BRINELL HARDNESS—will be tested. *Heat Treatment Test Laboratory, room 115.*

MECHANISMS—used to illustrate the principles of machine design, gearing, bearings, steam pistons, etc. *Room 138.*

COMMERCIAL DISPLAYS—*Basement.*

ARC WELDING—gas welding, resistance welding, and flame cutting. *Welding Laboratory, room 221.*

A $\frac{1}{4}$ HORSEPOWER ENGINE—will be designed, machined, assembled and operated. *Machine Shop Laboratory, room 218.*

MOVIES—will be shown continuously, *room 253.*

The following exhibits are presented by the student branch of the Society of Automotive Engineers.

CHEVROLET PASSENGER CAR ENGINE—A discussion of specifications and actual operation will be shown.

INTERNATIONAL HARVESTER ENGINE-MODEL UD—A discussion on the theory of Diesel operation and a demonstration of compression and ignition will be given.

OLDSMOBILE CHASSIS—A cutaway view of the chassis and engine showing all internal parts. Lamp bulbs will be set in spark plug positions to show relation between spark and valve timing.

Shown in the Internal Combustion Engine Laboratory.

MECHANICAL ENGINEERING LABORATORY

ON DISPLAY—will be the cutaway radial engine, jet engine cut-away, belt tester, knock testing engine, and air conditioning equipment.

MOTORISTS' REACTION TESTING DEVICE—simulating regular driving conditions to test driver's reaction time in stopping under various driving conditions.

METALLURGICAL LABORATORY

The following exhibits are presented by the student branch of the Mineral Industries Society.

METALLURGICAL MICROSCOPE—in which specimens of metals are magnified 500 times.

METALLOGRAPH—in which photographs of specimens under the microscope are taken.

CUPOLA, ELECTRIC ARC, AND ELECTRIC INDUCTION FURNACES—shown in action as molten metal is poured like water.

LIQUID METAL—sprayed like paint.

STRUCTURE OF URANIUM.

MINING LABORATORY

The following exhibits are presented by the student branch of the Mineral Industries Society.

A COMPLETE MILL PROCESS—Separation of metal from ore.

ROCK CRUSHING—with gyratory and jaw crusher type rock crushers.

ROCK SEPARATOR—in which large particles of rock are sent back for further grinding.

COAL AND ITS PRODUCTS—will be on display with some mining equipment.

MOVIES—of mining and metallurgical operations will be shown continuously.

PHYSICS BUILDING

The following exhibits are presented by the students in Engineering Physics.

STANDING WAVES—using a rope and stroboscope.

GEIGER COUNTER.

GYROSCOPE—shown in actual operation.

MERCURY HAMMER—made with liquid nitrogen.

Shown in room 100.

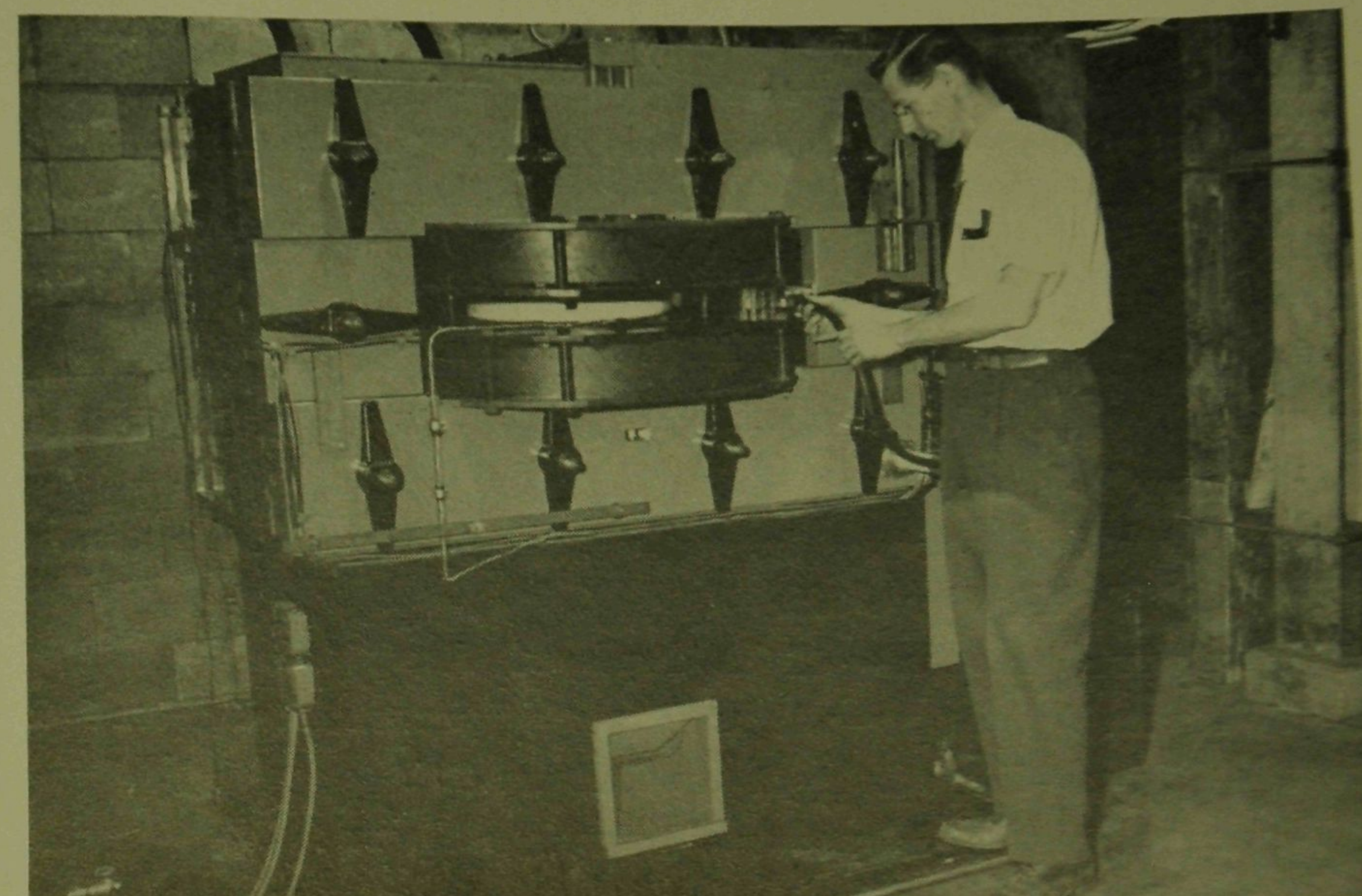
GEIGER SCALARS—Types of scalars for counting Geiger pulses.

INSIDE A TELEVISION TUBE—Electron gun and deflecting plates of a cathode ray tube.

WILSON CLOUD CHAMBER.

REFLECTION OF X-RAYS—Small pencil of X-rays bouncing off a crystal and detected with a Geiger counter.

Shown in room 112.



This is a view of a small betatron. Shown in the picture is Professor Donald Kerst, who invented the first betatron in 1940. The betatron is a device for accelerating electrons to amazingly high speeds so that they may be used to split the nuclei of atoms. The largest betatron in the world, a 300 million volt radiation machine, will be shown in the Physics Research Laboratory, commonly referred to as the Betatron Building.

SANITARY ENGINEERING LABORATORY

The following exhibits are presented by the American Society of Civil Engineers.

MODEL OF A COMPLETE WATER SUPPLY AND SEWAGE SYSTEM—for a small town, complete in every detail.

MOVIES—on sanitary engineering will be shown continuously.

TALBOT LABORATORY

The following exhibits are presented by the American Society of Civil Engineers.

A CONCRETE CYLINDER—will be broken every hour on the hour by the three million pound hydraulic testing machine, *Main Laboratory*.

DEMONSTRATIONS OF CLASS EXPERIMENTS—including tests of pumps, turbines, and weirs, *Fluid laboratories*.

PHOTOELASTIC MODELS—These models glow in bright colors at points of stress when viewed under polarized light.

TRANSPORTATION BUILDING

The following exhibits are presented by the students in the General Engineering Drawing classes.

INDUSTRIAL PRODUCTION ILLUSTRATIONS—work done in the student course, G.E.D. 110, *Room 308*.

AIRCRAFT DRAWINGS—will be displayed, *Room 306*.

DRAFTING EQUIPMENT—will be shown in demonstration, *Room 305*.

SLIDE RULES—Fifty different types, *Room 303*.

REPRODUCTION OF ENGINEERING DRAWINGS, *Room 400*.

THREE DIMENSIONAL SLIDES—used for teaching descriptive geometry, *Room 316*.

SOUVENIRS—will be given by the General Engineering Drawing Department.

OTHER ATTRACTIONS YOU CAN'T MISS

The power plant of the University of Illinois will be open for general inspection. Regular tours will be conducted through the plant every hour on the hour from 3:00 P. M. to 6:00 P. M. Friday, March 31, and 10:00 A. M. to 4:00 P. M., Saturday, April 1.

In addition to these exhibits on the Engineering campus, there are three railroad cars open for your inspection on the Illinois Central Railroad siding near the Betatron Laboratory on the south side of the campus.

THE DYNAMOMETER TEST CAR, owned jointly by the University and the Illinois Central Railroad, has what is known as a hydraulic system for measuring the pull that a locomotive exerts against the resistance offered by a train.

THE AIR BRAKE INSTRUCTION CAR, owned by the railroad, is used to educate railroad men in the design, construction, and principles of operation and servicing of air brake equipment used on cars and locomotives.

THE RAIL FLAW DETECTOR CAR is used to detect transverse fissures, compound fissures, and detail fractures in rail.

PARADE

At 12:00 o'clock noon, Friday, March 31, all engineering students of the University will be excused from classes and the I SEE will begin officially. At 2:00 P. M., the parade will begin on Green Street. Leading the parade will be the St. Pat's float including the famous Blarney Stone found recently in the Boneyard Creek on the North Campus. Included in the parade will be an Engineering Band and a long line of the newest model automobiles. Each engineering society will feature a float, as will the honorary engineering fraternities, and the two social engineering fraternities, Sigma Phi Delta and Triangle.

ST. PAT'S BALL

The first St. Pat's Ball was innovated in 1934. It was such a success that the dance was established as an annual affair for engineering students. The war interrupted the festivity, but the St. Pat's Ball was revived in 1948.

Now again this year, the engineering dance will climax the series of elaborate events on North Campus. St. Pat himself will be present to perform the knighting ceremony. Deserving seniors in the College of Engineering will have the title "Knight of the Order of St. Pat" bestowed upon them. The semi-formal dance will be held Saturday, April 1, 9-12 P. M. at Huff Gymnasium. Tickets may be obtained at the Illini Union box office.

ENTERTAINMENT AT FOUNDATION

The McKinley Foundation, an independent university student center, will hold open house Saturday evening, March 31, for high school visitors. Located at Daniel and Fifth Streets in Champaign, the foundation will serve food and provide entertainment in the form of games and movies.

LUNCH STAND

For a quick and delicious snack, take advantage of the two I SEE lunch stands. One is located at the west side of the first balcony above the Agricultural Engineering exhibit in the East Chemistry Building. The other is at the west end of the Dynamo Laboratory in the basement of the Electrical Engineering Building. These two stands will serve the best of hamburgers, hot dogs, pie, ice cream, milk, and coffee.

A WORD OF THANKS

Many people have contributed to the success of the I SEE. We would like to thank the many students who gave birth to this year's open house and who worked so diligently on the project these past few months.

Without the friendly aid and encouragement of Dean W. L. Everett, the I SEE might never have been possible. The faculty also deserves a word of praise for their fine cooperation and work done for the exhibits.

The splendid work of Ray Hauser was an inspiration to all of us through the many weeks of preparation. He was the engineer behind the job.

The cover illustration was drawn by George Reihmer and the map was drawn by Connie Minnich.

The use of the wireless communication units which are facilitating the coordination between buildings is made possible through the courtesy of Motorola, Inc.

REGISTRATION OF VISITORS

In order to help in the planning of future engineering student shows, the committees have placed attendance cards at the displays. Please fill out one of these at the first display you visit and place it in the box provided.

Any written comments or suggestions will be appreciated and may be placed in the same boxes.

INFORMATION

The headquarters for the I SEE are on the first floor of the Civil Engineering Building, which is located directly across Green street from the Illini Union. If you wish information or have any questions concerning the I SEE, stop here. There is also an information booth located in the lobby of the first floor of the Illini Union. They will be happy to assist you.

I SEE PERSONNEL

Chairman.....RAY HAUSER

CENTRAL COMMITTEE

PARADE

Connie Minnich, Chairman
Dean Felton
John Huber
Al Makulec
Frank Blake

PROMOTION

Tom Brown, Chairman
Bob Friedman—Statewide
Chuck Waters—Local

PHYSICAL ARRANGEMENTS

Maurice Cobb, Chairman
Dave Cash—Food
Harry Miles—Lighting
Dick Warnock—Accommodations
Dick Powers—Signs

PROGRAM

Art Dreshfield, Chairman
George Vriend—Awards
Frank Schnierow—Attendance
Bob Bannon—Headquarters
Richard Chorony—Programs
Jim Roberts—Circulation

EXECUTIVE COMMITTEE

AFS	Charles E. Waters
AICbE	Bob Gaudlitz
AIEE-IRE	Cliff Stettler
ASAE	Jere Castor
ASME	Victor Swenson
ASCE	Harry Von Huben
IAS	Cliff Felt
IES	Val McClusky
ITE	Tom Fry
MIS	Jim Skarda
SAE	Bob Reynolds
SBACS	Jerry Schweitzer
Physics	George Mader
Arch. Eng.	Jim Woods
G. E. D.	Tom Richardson